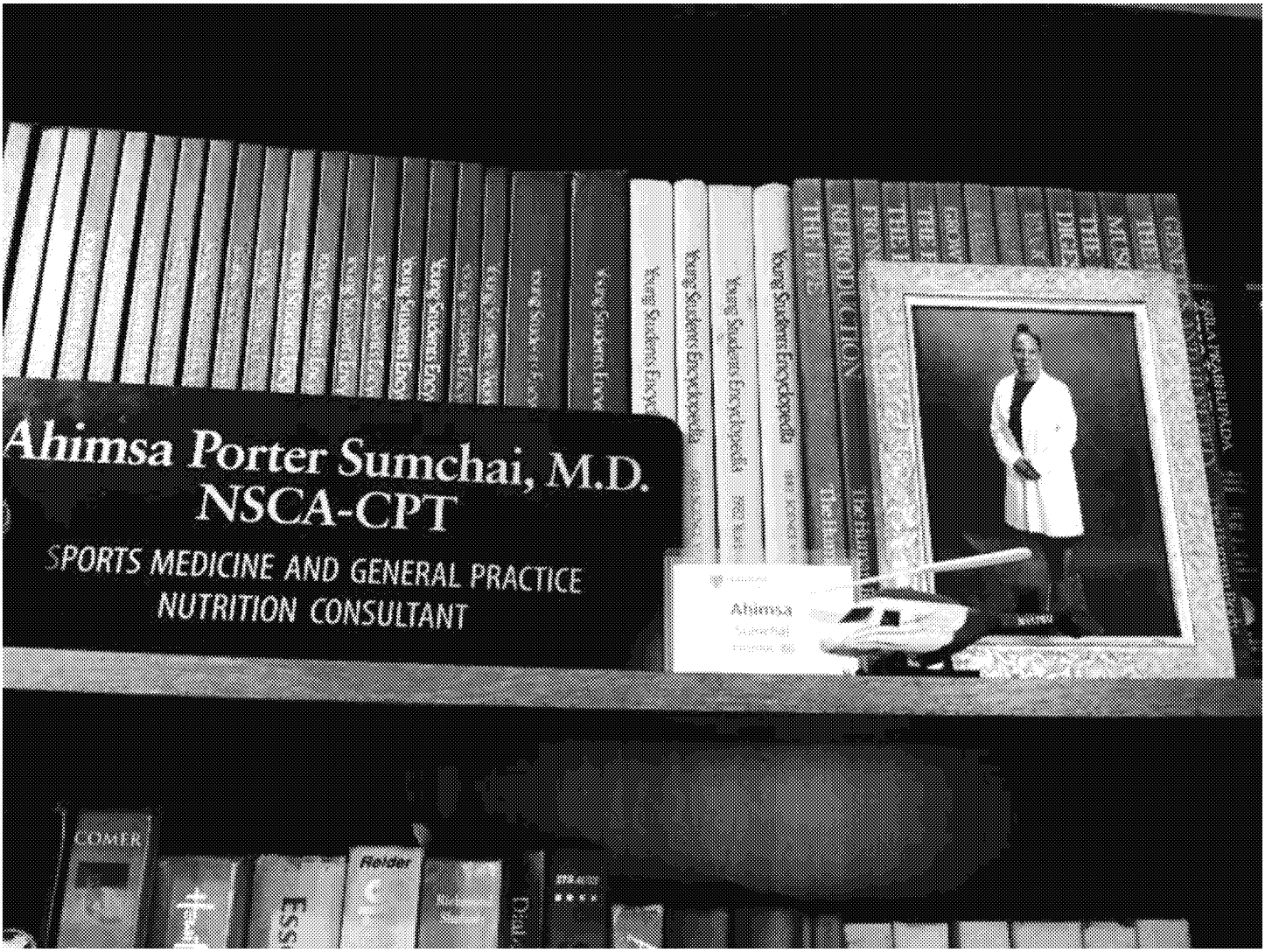
Message

From: Ahimsa Sumchai [ahimsaportersumchaimd@comcast.net]
Sent: 1/7/2019 5:58:05 PM
To: Raymond Tompkins [rtomp@sbcglobal.net]; jmichellepierce@gmail.com; bradley@greenaction.org; sheridan@greenaction.org; Shanell Williams [info@shanellwilliams.com]; llparker1@gmail.com; greg@gregpennington.com; ellingtontheo@gmail.com; Carolyn Nash [carolyn3917@att.net]; Christopher Muhammad [m26sf@aol.com]; cbonner799@aol.com; danielblandry@yahoo.com; Tascope@att.net; derek.toliver@gmail.com; Dnc_carpenter@yahoo.com; STEVE zELTZER [lvpsf@igc.org]; Carol Harvey [carolharvey1111@gmail.com]; tonykelly@astound.net; Tony@verreos.com; Marie Harrison [mariegreenaction@gmail.com]; ajijic51@mac.com; Elaine Brown [sistereb@bellsouth.net]; Brother Miles [rezurxn@hotmail.com]; lwaxmann@sfexaminer.com; Peter Palmer [palmer@sfsu.edu]; SubraCom@aol.com; davidantonlaw@gmail.com; scastleman@ggu.edu; killeryellow@berkeley.edu; cbloggy@gmail.com; Pierce, Karen (DPH) [karen.pierce@sfdph.org]; Tomas.Aragon@sfdph.org; kathryn.higley@oregonstate.edu; Cohn, Karen (DPH) [Karen.Cohn@sfdph.org]; healthcommission.dph@sfdph.org; sfpd.commission@sfgov.org; Board Supervisors [board_of_supervisors@ci.sf.ca.us]; michaelboyd@sbcglobal.net; cdizikes@sfchronicle.com; MGray@sfchronicle.com; jason.fagone@sfchronicle.com; John Diaz [jdiaz@sfchronicle.com]; Derek Robinson [derek.j.robinson1@navy.mil]; Derek.Robinson1@navy.mil; laura.duchnak@navy.mil; Amy Brownell [amy.brownell@sfdph.org]; UCSF Synapse [synapse@ucsf.edu]; Talmadge.King@ucsf.edu; info@hpscac.com; info@kamalaharris.org; Francisco DaCosta [fdc1947@gmail.com]; Sven Rodenbeck [svr1@cdc.gov]; Robert.Hiatt@ucsf.edu; TScott@gdx.net; mkraus@rosefdn.org; larryrosemd@sbcglobal.net; LEE, LILY [LEE.LILY@EPA.GOV]; Vianu, Libby [Vianu.Libby@epa.gov]; radiorupa@gmail.com; mrs.nikcolecunningham@gmail.com; dinahblanson@yahoo.com; jkdineen@sfchronicle.com; Editor Weekly [editor@sfweekly.com]; Emily Goldfarb [egoldnrio@aol.com]; Norman.Yee@sfgov.org; karen.smith@cdph.ca.gov; abigail.blodgett@doj.ca.gov
Subject: Advancing Environmental Public Health through Community Exposure Research and the New Science of...



---------- Original Message ----------
From: Ahimsa Porter Sumchai MD <asumchai@gmail.com>
To: Ahimsa Porter Sumchai <AhimsaPorterSumchaiMD@comcast.net>
Date: January 7, 2019 at 9:32 AM
Subject: Advancing Environmental Public Health through Community Exposure Research and the New Science of…

https://medium.com/@asumchai/advancing-environmental-public-health-through-community-exposure-research-and-the-new-science-of-81149036c2f4

Advancing Environmental Public Health through Community Exposure Research

and the New Science of Biomonitoring

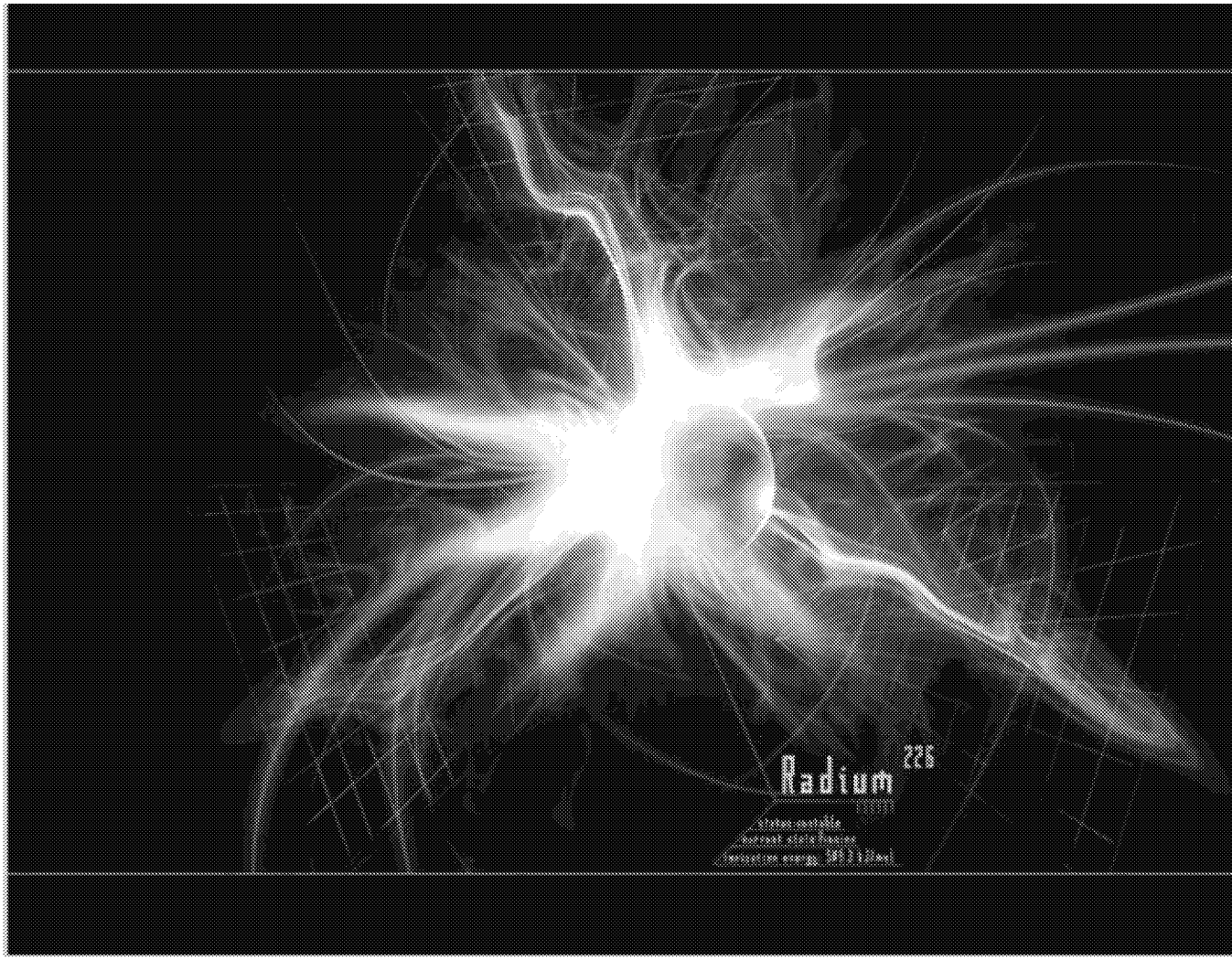
Ahimsa Porter Sumchai MD Jan 6

Ahimsa Porter Sumchai MD—President & Medical Director Golden State MD Health & Wellness

“My beautiful radium.”

Madame Marie Curie was the first woman to win a Nobel Prize in physics in 1903. In 1911 She became the first scientist to win the Nobel Prize twice with her discovery of the radioactive elements radium and polonium. Madame Curie championed the use of portable x-ray machines during World War I. She died on July 4, 1934 from aplastic anemia due to prolonged exposure to radiation.

85 years have passed since Madame Marie Curie died of a rare blood disorder linked to radiation exposure -in which her bone marrow stopped producing new blood cells. She was known to carry test tubes of radium- the radioactive element she discovered in 1898 -in the pocket of her lab coat. “My beautiful radium”, she wrote, enthralled by it “with ever new emotion and enchantment.”



Radium 226 by Aign0r on DeviantArt

The element Radium is a million times more radioactive than uranium. Madame Curie's lab books are so highly contaminated they cannot be safely handled today. According to the Agency for Toxic Substances & Disease Registry, radium can be detected in the human body using a simple urine test.

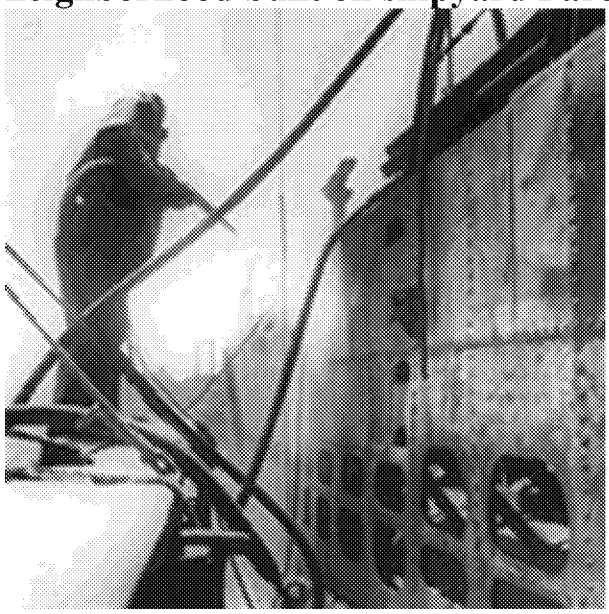
Radium's tissue destroying properties were enlisted in the battle against cancer and in 1902 American scientist William Hammer obtained samples of radium for medical experimentation.

Radium was used to make luminous paint for watches, aircraft instrumentation dials and deck markers for ships. According to Kate Moore, author of The Radium Girls, when the coffin of Amelia Maggia, an employee of the United States Radium Corporation was exhumed five years after her death at age 24,

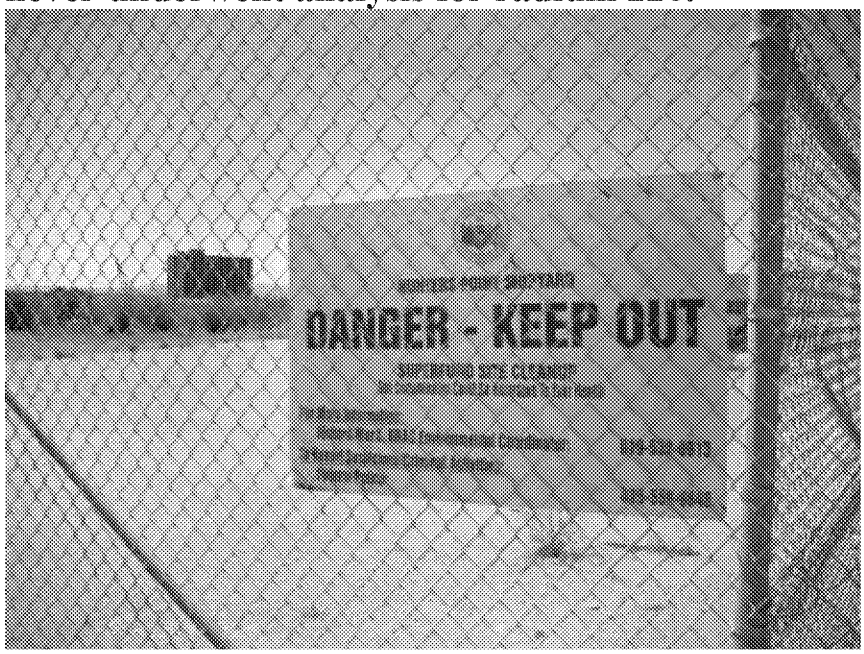
"Mollie's corpse was seen to be aglow with a soft luminescence."

Working class girls as young as 14 applied for jobs painting luminous numerals on watch faces and dials for military use in radium dial painting studios in Newark, New Jersey and Illinois. The "radium girls" were instructed to place the fine paint brush in their mouth to sharpen the tip. The first legal suit against the United States Radium Corporation was filed in 1925 on behalf of the "Radium Girls" who suffered chronic fatigue, stillborns, tooth decay, jaw necrosis and early death due to hemorrhage.

The Hunters Point Naval Shipyard located in Southeast San Francisco is a Federal Superfund site. Radium is one of the most abundant radionuclides of concern in buildings, soils, and sewer systems at the decommissioned naval base. Radium emits gamma wave s as well as alpha and beta particles. A radium dial was discovered in 2018 while gamma scanning a residential neighborhood built on shipyard Parcel A.



"Black beauty sandblast" containing radium 226 at the Hunters Point Naval Shipyard was created by decontamination processes applied to ships exposed to atomic explosions during Operation's Crossroads nuclear weapons tests in the South Pacific in 1946 hauled back to HPNS. Sandblast was uncovered on shipyard Parcel A that now sites residential development. It never underwent analysis for radium 226.



T he Hunters Point Naval Shipyard was assigned an EPA Hazard Score of 49 making it one of the most toxic properties on the National Priorities List. Many of the chemicals and radionuclides of concern at the Superfund site can be measured in human body fluids and tissues in a process called biomonitoring.

"Biomonitoring is the next logical, critical step for us to take in addressing threats to public health." Senator Deborah Ortiz, D-Sacramento.

State Senator Deborah Ortiz authored SB 689- The California Biomonitoring Program in 2003

Modern scientists can detect toxic chemicals in human tissue and body fluids using the new science of biomonitoring. In 2002, a study called "The Body Burden" found dangerously high levels of toxic chemicals in body of fluids of participants who volunteered to be tested. Biomonitoring is research that measures the levels of chemicals in our bodies by analyzing samples of blood, urine, breast milk, umbilical cord, hair samples and even baby teeth!

In 2003, a network of public health, faith, labor and environmental scientists—known as the California Body Burden campaign - championed legislation to make California establish a biomonitoring program. That year state Senator Deborah Ortiz introduced legislation to create The Healthy California Biomonitoring Program. In 2008 meetings were conducted in Oakland, California on the implementation of the California Biomonitoring program. That meeting was attended by scientists and activists of the Bayview Hunters Point Community First Coalition.

The Hunters Point Community Biomonitoring Program was launched in 2019 predicated on the work a scientific team submitted to the NIEHS in 2009.

Environmental Scientist, Activist and Educator Raymond Tompkins analyzes soil samples with 12 year old students at the UC Berkeley Chemistry Lab Summer Boot Camp. In 2009, Tompkins and a team of community and academic scientists submitted a proposal for NIEHS funding for community exposure research- including biomonitoring-of children attending schools within a one mile radius of the Federal Superfund site at the Hunters Point Shipyard.

A conundrum is a riddle, or a puzzle whose answer is often a pun. One of the most often quoted scientific conundrums is "which came first..the chicken or the egg?"

In environmental public health this conundrum is evident in epidemiological studies raising question as to whether an apparent increase in incidence of asthma, cancer, heart attacks or infant mortality is the result of it occurring more…or is it simply being detected more due to increased surveillance and documentation?

In the Bayview Hunters Point community epidemiological conundrums are evident in breast cancer clusters and increasing infant mortality rates along with diseases clearly linked to toxic

exposures including cardiopulmonary, neurological and autoimmune disorders and cancers of radiosensitive organs.

The answer to this public health conundrum can be approached by longitudinal studies that follow the rates of occurrence of a disease over time. Community exposure research draws upon environmental monitoring of air, soil and water along with demographic mapping of toxic sources. All of these epidemiological research models are amplified by the science of biomonitoring in establishing direct cause and effect relationships between toxins in the environment and their disease expression among members of the exposed community.

The Body Burden of the Earth

In 2004, the Environmental Health Section of the San Francisco Department of Public Health documented an increase in hospitalization rates for adult and pediatric asthma, emphysema and

congestive heart failure in Bayview Hunters Point ranging from 500 to 2317 cases per 100,000. Additionally, the California Office of Statewide Health Planning and Development analyzed hospital discharge rates in 2000 for adult and pediatric asthma finding an incidence of 851 per 100,000—the highest rate in San Francisco.

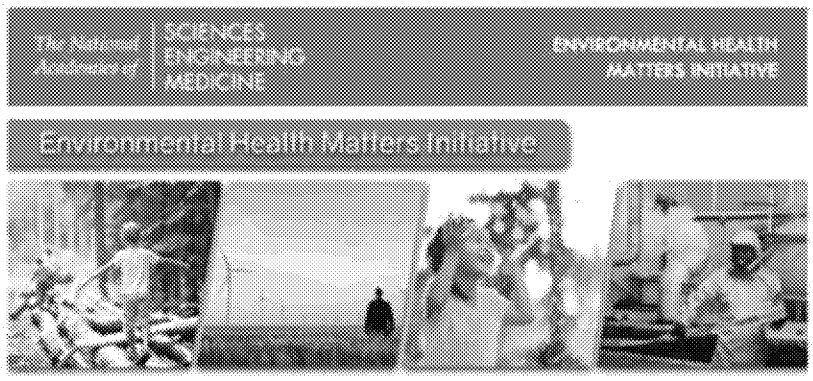
According to the Bay Area Air Quality Management District air pollution in Bayview Hunters Point ranks in the 80th percentile for particulates, carbon monoxide, nitrogen oxides and volatile organic compounds and in the 90th percentile for sulfur dioxide.

The US EPA Office of Air and Radiation's, "Particle Pollution and Your Health", identifies particulate matter as a mixture of microscopic solids and liquid droplets suspended in air. Particulate matter is made of a variety of compounds including acids, organic chemicals, metals, soil, dust and allergens. The BAAQMD's air quality report identifies particle pollution from grading and construction projects as a mix of very tiny solid and liquid particles called fine particulates.

Short term exposure to particle pollution can, within hours, aggravate lung disease, trigger asthma attacks and acute bronchitis and increase susceptibility to respiratory and ENT infections. In people with heart disease, short term exposure to particulates is linked to heart attacks and arrhythmias. Particulate exposure has been linked to pre-term labor and increased infant mortality rates. All of these conditions are evident as health disparities in Bayview Hunters Point.

The National Academy of Sciences Environmental Health Matters Initiative defines environmental health as the science and public health practice focused on the relationships between the environment and public health.

"Every day, in every endeavor, people interact with their environments. Healthy environments are crucial both to the quality of life and to the years of healthy life that people enjoy. Environmental factors that affect human health are many and diverse, including exposure to pollutants, climate change, occupational hazards and the built environment." ***National Academy of Sciences Environmental Health Matters Initiative***



Healthy environments are crucial to human health, but preventing harm from environmental exposure is rarely straightforward. That's why we created the Environmental Health Matters Initiative (EHMI) to explore innovative solutions to protect human health.

This newsletter will provide updates on the initiative's work, and it will also share information about environmental health-related activities across the National Academies. Read below to discover ongoing and recent work that we're doing in this critical area.

Subscribe to receive future updates about the EHMI

Upcoming Events | Active Projects | Report Spotlight
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Upcoming Events

http://nas-sites.org/envirohealthmatters/

In July of 2018 Biomonitoring California was asked to implement a state sponsored program in San Francisco to measure chemical exposures in residents living within a one mile radius of the Federal Superfund site at the Hunters Point Naval Shipyard. Biomonitoring California engaged with environmental health and justice representatives working with communities disproportionately impacted by environmental hazards at its November 2017 Scientific Guidance Panel Meeting.

Duyen Kauffman, Health Program Specialist with the Biomonitoring Section of the Office of Environmental Health Hazard Assessment responded in October of 2018: "Biomonitoring is a valuable tool that can directly measure exposures to metals and other chemicals, and biomonitoring results can be one part of evaluating potential health impacts of those chemical exposures.

Unfortunately, the capacity of Biomonitoring California to respond to requests such as yours is extremely limited. Our major focus is on statewide surveillance, gathering a representative sample to measure chemical exposures in the California population…as a comparison to results from community based studies."

Ahimsa Porter Sumchai MD <asumchai@gmail.com> 12/22/2018 11:38 AM

Chemicals Biomonitored in California | Biomonitoring California

To Ahimsa Porter Sumchai <ahimsaportersumchai1@comcast.net>

https://biomonitoring.ca.gov/chemicals/chemicals-biomonitored-california

BIOMONITORING CALIFORNIA

HOME | ABOUT | PROJECTS | CHEMICALS | RESULTS | RESOURCES | MEETINGS | EN ESPAÑOL |

Chemicals Biomonitored in California

Chemicals currently measured in Biomonitoring California projects

Biomonitoring California selects specific chemicals to measure in each of our projects. See the list below for chemicals we currently biomonitor.

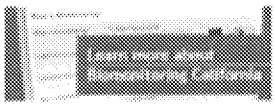
Factors that determine whether a chemical is measured in a particular project include:

- *Recommendation as a priority chemical by the Scientific Guidance Panel*
- *Public health importance*
- *Relevance of the chemical to the group of people being studied in a particular project*
- *Laboratory considerations*
- *Feasibility and available Program resources*

Chemicals Biomonitored in California

The chemicals currently being measured in Biomonitoring California studies are:

Acrylamide
Arsenic
Benzophenone-3 (Oxybenzone)
Bisphenol A (BPA)
Cadmium
Cobalt
2,4-Dichlorophenoxyacetic acid (2,4-D)
N,N-Diethyl-3-methylbenzamide (DEET)
Environmental Phenols
Herbicides
Lead
Manganese
Mercury
Metals
Molybdenum
Non-halogenated Aromatic Pesticides
Organochlorine Pesticides
Organophosphate Flame Retardants (OPFRs)
Organophosphate Pesticides
Other Pesticides
Pesticides
Pyrethroids
Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs)
Perfluorooctanoic (PFOA)
Pesticides
Phthalates
Polybrominated Diphenyl Ethers (PBDEs)
Polychlorinated Biphenyls (PCBs)



Printer-friendly version

Quick Chemical Links

- Chemicals Biomonitored in California
- Searchable Chemical Index
- Scientific Documents
- Fact Sheets
- Designated Chemical List
- Priority Chemical List

Upcoming Meetings and Events

March 06, 2019 | Sacramento, CA
Biomonitoring California Scientific Guidance Panel Meeting, March 2019

July 25, 2019 | Oakland, CA
Biomonitoring California Scientific Guidance Panel Meeting, July 2019

November 06, 2019 |
Biomonitoring California Scientific Guidance Panel Meeting, November 2019

Meeting Archive

Quick Links

Newsletter
About Our 10th Anniversary
Chemicals Biomonitored in California
Biomonitoring Guide
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AMBER ALERT: Save a Child

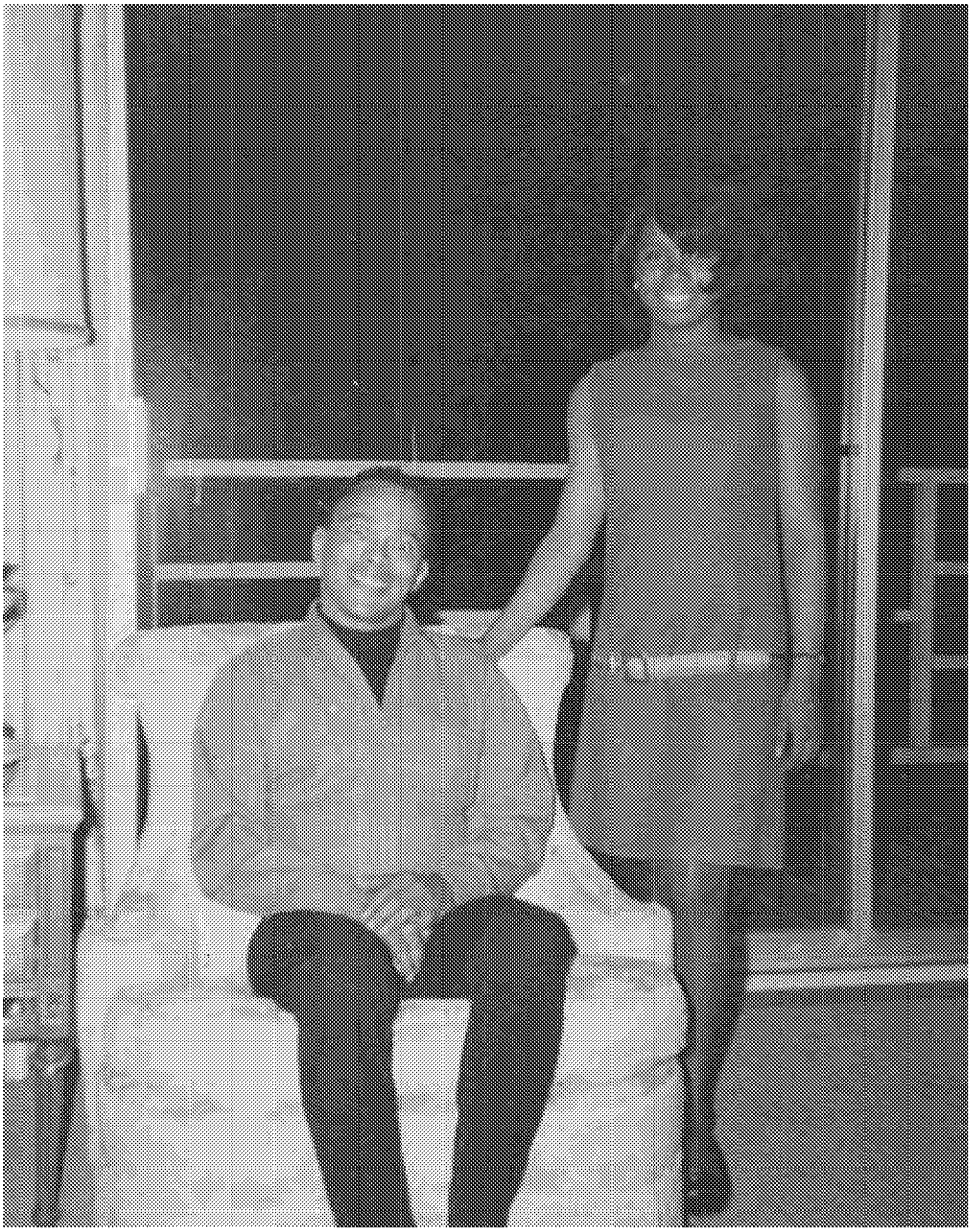
Chemicals measured by Biomonitoring California

Biomonitoring California sponsors a program in the San Francisco Bay Area called the East Bay Diesel Exposure Project that measures markers of diesel exhaust in 50 families. There are no programs, however, that measure human exposure to toxic chemicals among residents living adjacent to a federal Superfund site in the nation. Thus, the Hunters Point Community Biomonitoring Program was born to advance environmental public health research and access to care in one of the nation's high risk communities.

Biomonitoring research, authored by UCSF researcher Tracey Woodruff, PhD, screened blood samples from pregnant women in San Francisco and found, on average, 56 suspect chemicals in the women's blood. Most were environmental organic acids (EOA's) found in pesticides and consumer products detected by high-resolution mass spectrometry which measures chemicals by their molecular weight. EOA's have chemical structures that can resemble hormones causing endocrine disruption to pregnant women and the developing fetus.

In 1997, while serving as the attending physician for the Palo Alto Veterans Administration's Environmental Health Registry I discovered it is the nation's largest toxic registry. The free voluntary medical assessment is offered to veterans exposed to environmental hazards during military service including ionizing radiation and depleted uranium. Positive findings linked with a proven exposure and documented health effects can boister a disability or benefits claim.

That transformative experience, coupled with the premature death of my father from pulmonary asbestosis—a career longshore worker at the Hunters Point Shipyard- inspired my commitment to the advancement of environmental public health in the community where I grew up.



George Donald Porter…and daughter Circa 1965

The Rose Foundation for Communities & the Environment celebrates 25 years of defending forests, planting seeds and building community.

The Hunters Point Community Biomonitoring Program in partnership with Golden State MD Health & Wellness propose the implementation of a project drawing upon the science of biomonitoring to establish cause and effect relationships between environmental toxins and their detection and expressions of disease in members of a high risk community living within a one mile radius of the Federal Superfund site at the Hunters Point Shipyard.

A powerful tool in community exposure research capable of measuring chemicals in human body fluids, Genova Diagnostics offers a safe and simple Comprehensive Urine Element Profile that detects 35 chemicals of concern including the dominant toxins known to be present at the shipyard and neighboring industry.

Comprehensive Urine Element Profile

24 hour Report

GENOVA DIAGNOSTICS

63 Zillicoa Street
Asheville, NC 28801

Patient: **SAMPLE PATIENT**
Age:
Sex:
MRN:

Toxic Elements

Element	Results in µg/24 hours	Reference Range
Lead	0.5	<= 1.5
Mercury	1.17	<= 2.17
Aluminum	1.6	<= 25.2
Antimony	0.016	<= 0.144
Arsenic	0	<= 49
Barium	0.1	<= 5.5
Bismuth	0.26	<= 0.78
Cadmium	0.05	<= 0.63
Cesium	0.5	<= 10.1
Gadolinium	1.117	<= 0.018
Gallium	0.502	<= 0.031
Nickel	0.81	<= 4.41
Niobium	0.112	<= 0.568
Platinum	0.196	<= 0.038
Rubidium	0	<= 2.468
Thallium	0.181	<= 0.273
Thorium	0.113	<= 0.108
Tin	1.06	<= 2.25
Tungsten	0.128	<= 0.264
Uranium	0.063	<= 0.027

Nutrient Elements

Element	Results in µg/24 hours	Reference Range
Chromium	11.7	0.5-10.7
Cobalt	3.09	0.01-3.56
Copper	14.5	3.6-18.5
Iron	9	5-76
Lithium	160	5-89
Manganese	1.66	0.03-1.83
Molybdenum	142	14-218
Selenium	5	24-273
Strontium	1	46-386
Vanadium	0.5	0.1-3.3
Zinc	65	51-857

Element	Results in mg/24 hours	Reference Range
Calcium	412	35-406
Magnesium	108	45-275
Potassium	2,012	680-4,558
Sulfur	812	353-1,567

Creatinine Concentration

Urine Creatinine*	136.00	38.00-200.00 mg/dL

Creatinine Concentration

Urine Total Volume (in milliliters): 1,200
Length of Collection: 24.0
Provocation Comment:
Information regarding provocation was not provided.

Genova Diagnostics Comprehensive Urine Elements Profile

The Hunters Point Community Biomonitoring Program is seeking crowdsource funding via a GoFundMe campaign and submitted proposals for start up and build out funds and fiscal sponsorship by the Rose Foundation for Communities and the Environment. Meetings are currently underway seeking academic and community non-profit sponsorship of the ambitious project.

Members of the steering committee for the program are participants in the Bayview Hunters Point Community Air Monitoring Project. Greenaction for Health and Environmental Justice, Bayview Hunters Point Community Advocates and Literacy for Environmental Justice have formed a Community Advisory Group to decide where to site 10 air monitors in the community to detect particulate matter pollution in conjunction with the California Air Resources Board.

The Hunters Point Community Biomonitoring Program is committed to the advancement of environmental public health and community exposure research through the detection of measurable chemicals in human body fluids. The permanent institution of a community biomonitoring program will guarantee improvements in the provision of medical standard of care to this high risk, marginally served, ethnically diverse, low income community.

Ahimsa Porter Sumchai MD—President & Medical Director
Golden State MD Health & Wellness

Originally published at medium.com on January 7, 2019.

- **Ahimsa Porter Sumchai MD**

  Medium member since May 2018

  President & Medical Director - Golden State MD Health & Wellness. Author and UCSF/Stanford Trained Researcher

Be the first to write a response…

Ahimsa Porter Sumchai MD